«garden cities» and the construction of «high-rise buildings in the Park». This is important because the green areas of the city today have great potential for socialization and comfort of citizens.

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ASSESSMENT OF HEAVY METALS AND PESTICIDE CONTAMINATION OF SOILS IN THE MOSCOW REGION

Moscow region is one of the most economically developed regions of the Russian Federation. Active human economic activity has a negative impact on the environmental situation in many areas of the Moscow region [1]. On a functional purpose on the territory of Moscow region is dominated by forest lands – 1834,2 thousand hectares (of 40%) and agricultural land – 1750,5 thousand hectares (38,2%). A significant share of the Moscow region is occupied by land settlements – 538,2 thousand hectares (11,8%), including land rural settlements – 328,7 thousand hectares. The main substances that pollute the land of the Moscow region are garbage (solid and liquid waste), oil products, pesticides, chemical fertilizers, heavy metals [2].

According to the level of pesticides in the soil in the first places are Mytishchi, Lyubertsy, Taldomsky, Balashikha areas (more than 5 kg/ha) [3].

Also, the unfavorable situation is seen in Yegoryevsk, Noginsk, Zagorsk, Odintsovo, Dmitrov, Sergiev Posad districts. About 40% of the Moscow region's land is occupied by soils contaminated with heavy metals. Among heavy metals, tin, molybdenum, tungsten, silver, copper, mercury, lead, strontium, zinc, barium, cadmium, predominate. The Average content of heavy metals in the Moscow

region in some places is 10 times higher than the norm. On the lands of suburban cooperatives and garden plots of the Moscow region, the content of zinc, lead and manganese in half of the cases exceeds the Maximum permissible norms by 1–3 times [3].

Wide application as a means of chemical defense found herbicides SIM-triazine series. Many of them are forbidden, but such as metribuzin is still widely used in the protection of plants [4, 5]. There is some information about this herbicide. Metribuzin is a fuel colorless solid with a characteristic odor, which is hardly soluble in water [6]. In the soil decomposes within 1–3 months, but can be stored up to a year. Low toxicity is to bees (hazard class 4) and other beneficial insects [7]. As a pollutant, it can be found in groundwater. In the practice of crop protection herbicides are used to combat annual dicotyledonous and monocotyledonous plants. For example, metribuzin is well established against the mountaineer loach, mustard field and other weeds [8].

The study of the mechanism of biological action of metribuzin showed that this drug is extremely effective inhibitors of cell division and inhibit the biosynthesis of valine and isoleucine in plants [3]. In plants resistant to herbicides of this type, partial decomposition of the substance occurs and binding to plant waste products [7], as a result, the herbicidal properties of the drug are lost [9].

A special place in the chemical pollution of the environment in the suburbs is landfill. Lack of elaboration in the legislation of this issue contributes to the formation of new unauthorized landfills. For example, a large number of unauthorized dumps and piles of garbage are on agricultural land, in abandoned agricultural buildings. Often, the owners of these lands are difficult to find, enterprises are in the stage of bankruptcy or other organizational changes.

Conclusion. Thus, the analysis of the obtained results allowed drawing a conclusion about the increased concentration of heavy metals in agricultural lands, primarily in those administrative areas that are located in close proximity to the capital metropolis and are characterized by developed industry (Leninsky, Lyubertsy and Podilsky districts).

Sufficiently intensive use of herbicides and pesticides in the Moscow region also poses a serious threat of chemical pollution of land, surface and groundwater.

Another complex problem of the Moscow region is the problem of the formation of new unauthorized landfills, which poisons the environment not only in the Moscow region, but also in the capital's metropolis.

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ПОЛИАРОМАТИЧЕСКИЕ ХЕМОСЕНСОРЫ ДЛЯ ФЛУОРЕСЦЕНТНОГО ДЕТЕКТИРОВАНИЯ НИТРОКРЕЗОЛОВ В РАСТВОРАХ, ВКЛЮЧАЯ ВОДНЫЕ*

Ключевые слова: нитрокрезолы, водные растворы, флуоресценция.

Производные нитрокрезолов являются известными компонентами некоторых гербицидов, в частности для картофеля [1]. Раннее неконтролируемое исполь-

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